

## ABSTRACT OF THE DISCLOSURE

An optical communication equipment comprises shared optical sources 88a-88d to be shared by communication nodes 100a-100d, the wavelengths of optical signals 76a-76d are converted into desired wavelengths  $\lambda_a - \lambda_d$  according to the addressed information of the corresponding optical label signals 77a-77d by using the shared optical sources 88a-88d, and routed to the addressed communication nodes without being converted into electrical signals by using the wavelength routing function of the cyclic-wavelength arrayed-waveguide grating (AWG) 120. The load of each communication node can be reduced by incorporating the multi-wavelength optical sources, which can be shared among individual communication nodes, into the router 80. Further, each communication node is provided with an optical gate or the like for returning the optical signal to the communication node from which the optical signal has been transmitted through the router 80 in order to adjust the transmission time lag between the optical signal and the corresponding optical label signal by the controllers 110a-110d.

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